Math 123
Fall 2017
Dr. Lily Yen

Assignment 1

Show all your work

Name: _____
Number: _____
Signature: _____
Score: ___/14

Problem 1: In a summer camp, a group of five children needed to shake hands with everyone else. How many handshakes would occur when they were all done?

Score: /2

Problem 2: Suppose the newly wed, Kendra and John, plan to have four children. If we list the genders of the children in birth order, how many different lists are possible? One possible order is *bbbg* for boy, boy, boy, girl.

Score: /2

Problem 3: Decide whether the two sequences of operations will give the same results.

Add two numbers, say x and y, then divide the result by 3.

versus

Divide x by 3 *and divide y by* 3*, then add the results.*

Score: /2

Problem 4: In a recent home run derby competition, Joe Pederson, Todd Frazier, and Prince Fielder hit a total of 72 home runs. If Pederson hit one more than Frazier and 23 more than Fielder, how many did Pederson hit?

Score: /2

Problem 5: Conjecture the next two equations in this pattern:

a. $2 + 4 = 2 \times 3$

b. $2 + 4 + 6 = 3 \times 4$

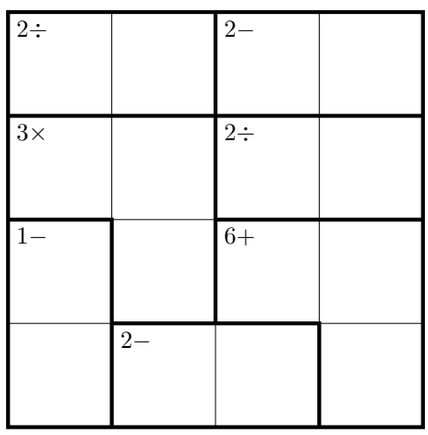
c. $2 + 4 + 6 + 8 = 4 \times 5$

d.

e.

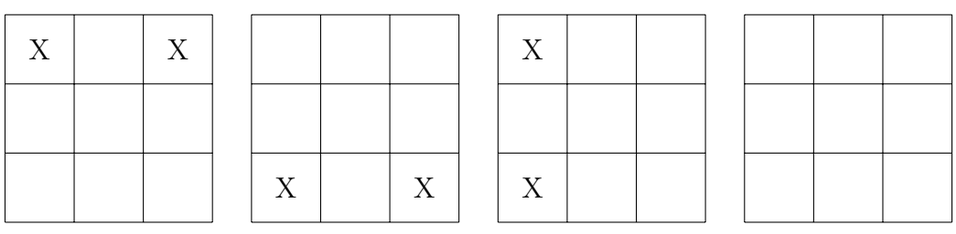
Score: /2

Problem 6: Solve this KenKen puzzle:



Score: /3

Problem 7: Use inductive reasoning to fill in the fourth figure in the pattern.



Score: /1